

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



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Applicant's or agent's file reference 93/30447-IIS-PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPC/416)	
International application No. PCT/DE 95/00055	International filing date (day/month/year) 16.01.1995	Priority date (day/month/year) 19.01.1994
International Patent Classification (IPC) or national classification and IPC H04H1/00		
Applicant FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER... et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>14</u> sheets, including this cover sheet. <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of <u>7</u> sheets.
3.	This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of the invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input checked="" type="checkbox"/> Certain observations on the international application

Date of submission of the demand 29.06.1995	Date of completion of this report 28.03.96
Name and mailing address of the IPEA/ EP	Authorized officer
Facsimile No.	Telephone No.

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1. Basis of the report.

1. This report has been drawn on the basis of *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*

☐ the international application as originally filed.

☒ the description. pages 1-12 : as originally filed.

pages _____ . filed with the demand.

pages _____ . filed with the letter of _____

pages _____ . filed with the letter of _____

☒ the claims. Nos. _____ . as originally filed.

Nos. _____ . as amended under Article 19.

Nos. _____ . filed with the demand.

Nos. 1-29 . filed with the letter of 04.03.96

Nos. _____ . filed with the letter of _____

☒ the drawings. sheets/fig 1/3-3/3 . as originally filed.

sheets/fig _____ . filed with the demand.

sheets/fig _____ . filed with the letter of _____

sheets/fig _____ . filed with the letter of _____

2. The amendments have resulted in the cancellation of:

☐ the description. pages _____

☐ the claims. Nos. _____

☐ the drawings. sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 25 - 29

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 25 - 29
are so unclear that no meaningful opinion could be formed (*specify*):

- 1 As explained in Box VIII, claim 25 contains the following obscurities.
- 2 The independent claim 25 (device claim) does not comply in respect of its category with the requirement of clarity of PCT Article 6, because it contains, by virtue of its back reference to the process claims 1 to 24, a mixture of process and device features.

.../...

☐ the claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: III

does the present claim 1 in the form of process features), for example, with the feature "... in that in order to detect the data concerning radio signals receivable at the current reception position, the receiver contains means for detecting data concerning the radio signals receivable in principle in a reception area supplied by one or more transmitters and for forming first lists (A) containing these data, **one or more characters being allocated** to the data in the lists (A) concerning radio signals transmitted by each transmitter ..."

Claim 25 also lacks the feature whereby the second local lists (B) contain, for each sector of the reception area, the **characters** allocated to the data concerning the radio signals receivable in the corresponding sector.

The features concerning the character allocation in the lists A and the acceptance of the valid character for each sector are of crucial importance for obtaining the advantages mentioned in the description, page 7, last paragraph and page 8, lines 1 to 12.

Claim 25 contains a further obscurity, because the statement in line 9 "... from **the** first memory ..." has no basis in the preceding text. This could perhaps be rectified either by using "... **a** first

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: III

According to PCT Rule 6.3(a), every (independent) claim must indicate all the essential technical features of the invention which are necessary for the definition of the subject matter for which protection is sought, i.e., the meaning of every independent claim must be clear **from the wording of the claim alone** (without reference to other independent claims).

In the present case, the preamble of the independent claim 25, which is directed to a receiver, should be worded as follows, for example:

"25. Receiver for detecting and providing radio signals and data concerning radio signals receivable at the current reception position using local data in a radio system in which reception positions in a reception area are supplied by one or more transmitters, characterized in that ..."

The meaning of the device features forming the preamble would then be clear from the preamble alone, without reference to another independent claim of a different category.

- 3 **Claim 25** contains a further obscurity, because the statement in line 10, "... from **the** lists (A) ..." has no basis in the preceding text. The characterizing portion of claim 25 should begin (as

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: III

memory ..." in line 5 or by deleting the word "first" in line 9 of claim 25. Either amendment would then provide the basis for the "additional memory" in claim 28.

Claim 25 also fails to comply with the requirements of clarity specified in PCT Article 6 in respect of the wording **of the characterizing portion**.

- 4 In conclusion, a claim 25 containing all the features of claim 1 in the form of device features would comply with the requirement of PCT Article 6 concerning clarity and would also comply with the requirements of PCT Article 33(1) to (4) concerning novelty, inventive step and industrial applicability, for the reasons adduced in Box V in connection with claim 1.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 24	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 24	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 24	YES
	Claims		NO

2. Citations and explanations

- 1 Following reception of the PCT written opinion of 03.11.95, the applicant has filed amended claims 1 to 29. These claims comply with the requirement of PCT Article 41(2) that amendments may not go beyond the disclosure in the international application as filed.

The present claim 1 is derived from the combination of the original claims 1, 4 and 8 with features which were originally disclosed in the description of the application, on page 6, second paragraph, page 7, third paragraph, page 9, second paragraph, page 8, first and second paragraphs, page 11, third and fourth paragraphs and in Figure 2.

- 2 The **closest prior art** to the subject matter of the application, the published specification D1 = EP-A-0 387 810 (first published specification in the international search report), discloses a **process** for detecting and providing radio signals and data concerning radio signals receivable at the current reception position using local data in a radio

system in which reception positions in a reception area are supplied by one or more transmitters.

The published specification D1 therefore supports only the preamble of **claim 1**.

The **object** of the present application is to indicate a process and a receiver for determining the receivability of radio signals in a radio system such that the radio signal desired by the user can be switched quickly and reliably to his receiver at any position within a reception area.

This object is **achieved** according to the characterizing features of claim 1 **in that** the data concerning radio signal receivable at the current reception position are detected using **first lists A** which contain the data concerning radio signals which are **receivable in principle** in a reception area supplied by one or more transmitters, one or more **characters** being allocated to the data in the lists A concerning the radio signal emitted by the corresponding transmitter, and **in that all radio signals receivable at the current reception position** and data concerning these radio signals are **selected** from the first lists A using **second local lists B** for each sector of the reception area, each list containing the **characters** allocated to the data on the radio signals receivable in the corresponding sector, and **in that** a radio signal selected by the user from all radio signals receivable at the actual reception position is made immediately available on the basis of the data provided.

The solution as per the application has the **advantage** that the B lists consist only of series of numbers

and can therefore be quickly entered by the user into the receiver, while the low memory requirement makes it possible to store not only the corresponding local B lists but also the B lists of the adjacent sectors.

This concept as per the application is neither disclosed nor suggested by any of the published specifications cited in the international search report.

In contrast to the subject matter of the application, the object of the above-mentioned D1 is to correlate the frequency received by a mobile receiver at any given time with the associated transmitter. This means that when a programme is first received, the transmitter from which it is being transmitted is as yet unknown.

In the process described in D2 = EP-A-0 072 943, the reception frequencies are displayed along with the associated transmitter identifiers only after a search.

In the process according to D3 = DE-A-30 40 465, the names of the transmitters to be displayed are selected using actual local data in the form of the local post code, i.e., not using a local list B.

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- 3 The subject matter of claim 1 is obviously also industrially applicable.
- 4 The subject matters of the dependent claims 2 to 24 define an advantageous development of the subject matter of claim 1 and are obviously also industrially applicable.
- 5 The present claims 1 to 24 therefore comply with the requirements of PCT Article 33(1) to (4) concerning novelty, inventive step and industrial applicability.

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

- 1 In claim 28, "or" in the penultimate line should be replaced by "and/or" because of the statement "and/or" in the third line.
- 2 An introductory portion of the description which takes into consideration the cited prior art should be filed (PCT Rule 5.1(a)(ii)).
- 3 (German text only) In the description, page 3, fourth line from the bottom, "in den Unteransprüchen" should be replaced by "in den abhängigen Ansprüchen" (PCT Rule 6.4).
- 4 (German text only) In the description, page 4, line 12, the comma should be deleted. On page 5, line 15, a comma should be inserted after "gespeichert".

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

- 1 The independent **claim 25** (device claim) does not comply in respect of its **category** with the requirement of clarity of PCT Article 6, because it contains, by virtue of its back reference to the process claims 1 to 24, a mixture of process and device features.

According to PCT Rule 6.3(a), every (independent) claim must indicate all the essential technical features of the invention which are necessary for the definition of the subject matter for which protection is sought, i.e., the meaning of every independent claim must be clear **from the wording of the claim alone** (without reference to other independent claims).

In the present case, the preamble of the independent claim 25 which is directed to a receiver, should be worded as follows, for example:

"25. Receiver for detecting and providing radio signals and data concerning radio signals receivable at the current reception position using local data in a radio system in which reception positions in a reception area are supplied by one or more transmitters, characterized in that ..."

The meaning of the device features forming the preamble would then be clear from the preamble

VIII. Certain observations on the international application

alone, without reference to another independent claim of a different category.

- 2 **Claim 25** contains a further obscurity, because the statement in line 10, "... from **the** lists (A) ..." has no basis in the preceding text. The characterizing portion of claim 25 should begin (as does the present claim 1 in the form of process features), for example, with the feature. "... in that in order to detect the data concerning radio signals receivable at the current reception position, the receiver contains means for detecting data concerning the radio signals receivable in principle in a reception area supplied by one or more transmitters and for forming the first lists (A) containing these data, **one or more characters being allocated** to the data in the lists (A) concerning radio signals broadcast by each transmitter ...".

Claim 25 also lacks the feature whereby the second local lists (B) contain, for each sector of the reception area, the **characters** allocated to the data concerning the radio signals receivable in the corresponding sector.

The features concerning the character allocation in the lists A and the acceptance of the valid character for each sector are of crucial importance for obtaining the advantages mentioned in the description, page 7, last paragraph and page 8,

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lines 1 to 12.

Claim 25 contains a further obscurity, because the statement in line 9 "... from **the** first memory ..." has no basis in the preceding text. This could perhaps be rectified either by using "... **a** first memory ..." in line 5 or by deleting the word "first"

in line 9 of claim 25. Either amendment would then provide the basis for the "additional memory" in claim 28.

Claim 25 also fails to comply with the requirements of clarity specified in PCT Article 6 in respect of the wording **of the characterizing portion**.